

In the Specification:

Please amend the following paragraphs as follows:

Please amend the following paragraph beginning at page 3, line 8 as follows:

5 Fig. 1 is a ~~geometrically optical typical~~ view in which light rays 5 are ~~expressed~~
~~shown~~. Luminous flux ~~really~~ emitted from a single-mode optical fiber, however, can be
 regarded as a Gaussian beam as shown in Fig. 2. In this case, two lenses 3 and 4 need to
 be disposed so that a beam waist (BW) 26 of a Gaussian beam 7 is formed at a midpoint
 between the two lenses 3 and 4 in order to obtain good coupling efficiency of the
 10 collimator parallel pair. That is, a first beam waist 16 (with radius of w_1) corresponding
 to light 17 emitted from the light source fiber 1 ~~once~~ forms a second beam waist ~~16~~ 26
 (with a radius of w_2) at the midpoint of the optical system and is coupled to the light-
 receiving fiber 2 in the position of a third beam waist 36 (with a radius of w_3 equal to
 w_1) by the second lens 4.

15

Please amend the following paragraph beginning at page 3, line 21 as follows:

If the wavelength used, the NA (numerical aperture) of each optical fiber and the
 positions of the focal point and principal point of each lens are known, then the values of
 WD and L in the configuration of Fig. 2 can be designed by calculation based on so-
 called ABCD rules using elements of a light ray matrix. Theoretically, for example,
 20 detailed numerical formulae have been described in *Foundation and Application of*
Optical Coupling System for Optical Device, Gendai Kougaku Sha (1991) written by
 Kenji Kawano. Some ~~of~~ optical design software programs available on the market have
 such ABCD calculating functions.

25

Please amend the following paragraph beginning at page 8, line 21 as follows:

In the optical coupling system ~~which is set~~ according to the invention so that (i.e.,
 the distance between the lenses or the distance between the lens and the reflection surface
 corresponds to the maximum distance allowing each lens to form a beam waist), coupling
 loss ~~little~~ changes little as a result of an even in the case where a certain degree of
 30 increase in aberration or defects ~~occurs against~~ compared to an ideal optical system or

b3
encl

even in the case where the performance of the optical system varies in accordance with the environmental change. In addition, the performance of the optical device obtained by applying the optical coupling system according to the invention ~~little~~ changes little as a result of ~~against the~~ displacement from the ideal design condition or ~~against the~~ as a result of environmental change.

Please amend the following paragraph beginning at page 30, line 2 as follows:

B4

As described above, when an optical coupling system constituted by two lenses according to the invention is used, both the change of coupling loss due to the substantial defects (chromatic aberration, and birefringence based on distortion) of each lens and the change of coupling loss due to the environmental change (temperature and humidity) can be suppressed to be small. Further, when an optical coupling system constituted by a combination of a lens and a reflecting mirror according to the invention is used, the change of coupling loss due to the defects (variation in focal length and astigmatism caused by optic-axial asymmetry) of the lens can be suppressed to be small. Hence, even in the case where the lens has some degree of substantial defects, the influence of the ~~defects~~ defects on the performance of the system is so small that the allowable range on production is widened to improve the yield on production. In addition, the change of the performance ~~in accordance with the~~ resulting from environmental change is so small that the reliability of the system is improved.
